

AMENDMENT NO. 2 MARCH 2015
TO
IS 11346 : 2002 TESTS FOR AGRICULTURAL AND WATER SUPPLY PUMPS
CODE OF ACCEPTANCE

(First Revision)

(Page 5, clause 3.3) — Substitute the following for the existing clause:

3.3 Calibration of Apparatus — All test instruments to be calibrated periodically at a frequency given below:

Equipment	Period
Flow rate :	
a) Weighing tank	1
b) Volumetric tank	5
c) Venturi	a
d) Nozzle	a
e) Orific plate	a
f) Turbine	1
g) Electromagnetic	1
h) Weir	5
j) Vee-Notch	5
(For geometrical measurements of Vee-Notch IS 9108 shall be referred)	
k) Current meter	2
m) Current transformer	2
Pressure :	
a) Spring pressure gauge	6 months
b) Dead weight	Not required
c) Liquid Column monometers	Not required
d) Transducers	1
Power :	
a) Dynamometer	1
b) Torque bar	1
c) Calibrated motor	5
d) Watt-amp-volt-frequency-power factor-ohm-meter, portable	1
e) Watt-amp-volt-frequency-power factor-ohm-meter, permanent	2
f) Torque meter with Strain gauge	6 months
g) Intermediate gears to 375 kW	10 months
h) Intermediate gears above 375 kW	20 months
Speed :	
a) Tachometer (general)	3
b) Electronic	1
c) Frequency responsive devices	
1) Magnetic	10
2) Optical	10
d) Stroboscopes	5
e) Torque meter (speed)	1
Temperature:	
a) Electric	2
b) Mercury	5

NOTES

- 1** Values in years unless indicated by months.
- 2** Not required unless suspected critical dimensional change.

Price Group 2

(Page 8, clause 7.4.2, first sentence) — Substitute the following for the existing sentence:

‘Overall efficiency for pump sets shall be as per IS 8034, IS 9079 and IS 14220’.

(Page 9, clause 7.5.1, first line) — Substitute the following for the existing sentence:

‘For coupled pumps as per IS 6595 (Parts 1 & 2), IS 8418 and IS 8472 ’.

(Page 9, clause 7.5.2, first sentence) — Substitute the following for the existing sentence:

‘Pumpsets shall be as per IS 8034, IS 8418 (Monoset), IS 8472 (Monoset), IS 9079, IS 12225 and IS 14220’.

(Page 9, clause 8.2, second para) — Substitute the following for the existing para:

‘If the guaranteed duty point lies above the test graph then vertical distance (ΔH) and horizontal distance (ΔQ) are observed from the graph and the following shall be evaluated’.

$$\left(\frac{H_G \times X_H}{\Delta H} \right)^2 + \left(\frac{Q_G \times X_Q}{\Delta Q} \right)^2 \geq 1$$

where X_Q and X_H are agreed tolerances applicable to ΔQ and ΔH respectively,

$$X_Q = 0.07$$

$$X_H = 0.04$$

(Page 10, clause 8.5, second sentence) — Substitute the following for the existing sentence:

‘For this purpose the manufacturer shall declare the recommended prime mover rating in case of bare pumps and maximum current at the guaranteed duty point in case of monoset/submersible pumpsets’.

[Page 11, clause 9.6.1(a)] — Substitute ‘IS 14582’ for ‘IS 996’.

[Page 11, clause 9.6.1(b)] — Substitute the following for the existing sentence:

‘Maximum self-priming static suction lift at mean sea level and 33°C water temperature’.

[Page 11, clause 9.6.1(c)] — Substitute the following for the existing sentence:

‘Maximum self-priming time at minimum 1.5 m static suction lift for semi self-priming pumps and 3 m for self-priming pumps at mean sea level and 33°C water temperature’.

(Page 11, clause 9.7.2, line 6) — Substitute ‘IS 14582’ for ‘IS 996’

(Page 14, clause 10.2.3) — Insert the following new clause after 10.2.3:

‘10.2.4 Bare pumps shall be tested using calibrated prime movers’

[Page 14, clause 10.3.2 (a)] — Substitute the following for the existing sentence:

‘a) The measured value of head, volume rate of flow and power input are within the limits indicated in clause 10.4’.

(Page 14, clause 10.3.2) — Insert the following new clauses :

Amendment No. 2 to IS 11346 : 2002

10.4 Tolerances

10.4.1 'At rated frequency / speed the pump shall give a minimum of 90 percent of rated total head at a minimum of 90 percent of rated discharge. The pump shall not take more than 110 percent of the declared power input at the guaranteed duty point.

10.4.2 'The motor shall not get over loaded in the operating head range of ± 25 percent of rated head at a rated voltage when the supply frequency is within the limit ± 3 percent of the rated frequency. The maximum allowable current shall be 1.07 times the declared full load current specified in IS 14582 for single phase and IS 7538 for three phase.'

(Page 20, ANNEX-A) — Substitute 'IS 996 : 2009' — 'Single Phase a.c. Industrial Motors For General Purpose — Specification' for 'IS 996 : 1979 — 'Single Phase Small a.c. and Universal Electric Motors-Specification'.

(Page 20, ANNEX-A) — Insert the following at the end.

<i>IS No</i>	<i>Title</i>
IS 14582 : 1998	Single phase small a.c. electric motors for centrifugal pumps for agricultural applications — Specification'.